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10/527,915	12/02/2005	Burkhard Frensch	2002P14859WOUS	9054

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Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

SINGH, HIRDEPAL

ART UNIT	PAPER NUMBER
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2609

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,915	Applicant(s) FRENSCH ET AL.	
	Examiner Hirdepal Singh	Art Unit 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-37 and 39-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-37, and 39-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the amendment filed on April 19, 2007. Claims 25, 34-35, and 39 are amended, and claims 38, and 47-48 are canceled. Now claims 25-37, and 39-46 are pending, and have been considered below.

Specification

The objections to the specification are corrected by the amendment, so the objections are withdrawn.

Claim Objections

Claims 47, and 48 are cancelled by the amendment, so the objection is withdrawn.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 31, 34, and 35 recites the limitation "SCADA" in lines 2, 3, and 2 respectively. There is insufficient antecedent basis for this limitation in the claims.

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Claim 39 recites the limitation "SQL" in line 2. There is insufficient antecedent basis for this limitation in the claim. All the acronyms used in the claims needs to be explained where they are used for the first time.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 25-36, 40, 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birchenough et al. (US 6,615,091) in view of Lewis et al. (US 5,812,394).

Claim 25: Birchenough discloses a system and method for controlling and monitoring a production process, comprising;

a. a process controller, provide control signals to and receives information data from, a designated process control module (column 25, lines 52-60);

b. transfer device transmits data information to the process station controller for a user of the system, and the information is used for generating alarms and warnings (column 26, lines 22-24; column 51, lines 23-26);

c. a distributed data system log storage contains a history (historian database) of all data transactions(column57, lines 52-55) and (column58, lines 55-60);

I. Birchenough does not explicitly disclose that the database is relational database. However, Lewis discloses a similar system for controlling and monitoring a process that further discloses the configuration is performed with tools such as relational database (column6, lines 22-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the database of Birchenough relational. One would have been motivated to have relational database to enhance the speed and performance of the system for controlling and manufacturing;

II. Birchenough further discloses that production process information data or the sequence of messages is acquired for historian data base and for a user through input output module based on a single application i.e. a coordinator agent (column44, lines 18-31; column39, and 40; lines 41-67, and 1-40);

III. Birchenough further discloses that production process information data or status of the system is represented and modified through the human machine interface (column46, lines 35-44).

Claim 26: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 25 above, and Birchenough further discloses an input output model that has encapsulation components coupled to a configuration store (fig 81; column53, lines 10-15).

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Claim 27: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 25 above, and Birchenough further discloses a controller that checks for a warning, if so outputs a warning (alarm) message (figs 73, and 74; colmn45, lines 27-30).

Claim 28: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 25 above, and Birchenough further discloses an independent interface to provide a server client relationship (fig 86; colmn56, lines 28-32).

Claim 29: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 28 above, and Birchenough further discloses a user interface portion, made up of hardware panel clients, web clients etc. could have telnet session (communication) with user interface through a network (internet, ethernet) (figs 85, and 86; colmn56, lines 50-65).

Claim 30: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 29 above, and Birchenough further discloses a system employing an interface with web browsers (fig 85; colmn55, lines 14-22) and also discloses a web server that acts as a broker between web browser and user interface (fig 86; colmn57, lines1-3).

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Claim 31: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 28 above, but neither explicitly disclose that the clients are embodied as SCADA clients. Applicant is not describing that the SCADA clients have any supervisory control. This is just an intended use, therefore no patentable weight is given to SCADA clients. Furthermore, This is inherent that the client could have supervisory control of the system (column31, lines 19-21).

Claim 32: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 28 above, and Birchenough further discloses an independent client of the system (fig 77; column46 lines 51-56, column47 lines 65-67, and column48 lines1-18).

Claim 33: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 32 above, and Birchenough further discloses the historical data being analyzed and presented in various forms (column58, lines 52-63).

Claims 34, and 35: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 32 above, and Birchenough further discloses the functionality of the clients of the system as communicating with the system, sending/receiving and displaying the process data (column47; lines 35-46, and column46, lines 50-57). (Applicant doesn't describe the specific functionality of the

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clients, Examiner assumes that the minimum functionality of the independent, SCADA clients is to communicate with the system, and to send/receive and analyze, and display the process data).

Claim36: Birchenough and Lewis disclose a system and method for controlling and monitoring a processing operation as in claim 32 above, but neither explicitly disclose the functionality of clients is in standard applications. However, Official notice is taken that it is old and well known in the computer arts to use standard computer applications for displaying the information data. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the standard applications functionality of the clients to display the information data. One would have been motivated to have the clients with standard office application functionality for displaying the information data for any further use.

Claim 40: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 25 above, and Birchenough further discloses a communication link that allows a user (client) to retrieve/access data information (column26, lines 38-58).

Claim 42: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 25 above, and Birchenough further discloses an interface that allows communication between the system and web

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browsers (clients) etc. (fig85; colmn55 lines 15-22), and also discloses bi-directional communication between client and server (colmn48, lines 18—20).

Claim 43: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 25 above, and Birchenough further discloses that a client/operator can control the system and has the ability to start, stop, configure, and obtain the information (colmn46, lines 35-40).

Claim 44: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 25 above, but neither explicitly disclose that the system for operating and monitoring is provided for managing users of the system and/or for planning process communication and/or a security system, examiner note that this is just an intended use of the system and is not a part/structure of the system, therefore little if any patentable weight is given, furthermore it would have been obvious to one of ordinary skills in the art at the time the invention was made that the system could be provided for managing users of the system and/or for planning process communication and/or a security system. One would have been motivated to have the system for operating and monitoring provided for managing users of the system and/or for planning process communication and/or a security system or any combination thereof.

Claim 45: Birchenough and Lewis disclose a system and method for controlling and

monitoring a production process as in claim 25 above, but neither explicitly disclose that the system for operating and monitoring is of redundant design, with redundancy also existing for independent clients. However, Official notice is taken that it is old and well known within the computer art to have redundant mechanisms to ensure that the work can resume immediately in case of total outage and/or to have fast access to data in case of overload conditions. Therefore, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have the system for operating and monitoring of redundant design with redundancy also existing for independent clients. One would have been motivated to have redundant mechanisms in the system to ensure uninterrupted work and fast access to the information data.

Claim 46: Birchenough and Lewis discloses a system and method for controlling and monitoring a production process as in claim 25 above, and Birchenough further discloses a network proxy for communication between client and server (fig 77, and 78; column 48, lines 2-15), but neither explicitly disclose a multiplexer component for concealing a redundancy and/or a plurality of data servers. However, Official notice is taken that it is old and well known within the computer art to have redundant mechanisms in the systems and multiplexers for concealing the redundancy. Therefore, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have the system for operating and monitoring with a multiplexer to switch the client to the redundant mechanism in case of failure. One would have been motivated to have multiplexer component in the system for concealing a

redundancy and/or a plurality of data servers.

5. Claims 37, 39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birchenough et al. (US 6,615,091) in view of Lewis et al. (US 5,812,394) and further in view of Nixon et al. (US 2002/0077711).

Claim 37: Birchenough and Lewis disclose a system and method for controlling and monitoring a production process as in claim 25 above, but neither explicitly disclose that the system has a central database for fast archiving of data. However, Nixon discloses a similar system for controlling and monitoring a process that further discloses enabling different data sources to provide process information data to the system for use as a central database (fig 2; paragraphs 66, and 82; specs). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to collect all the process information data in Birchenough as a single/central database. One would have been motivated to make all process information data available as a central database to manipulate, organize, and provide fast access for different applications.

Claim 39: Birchenough, Lewis, and Nixon disclose a system and method for controlling and monitoring a production process as in claim 37 above, but none of these references explicitly disclose accessing the database by SQL(Structured Query Language) queries. However, Official notice is taken that it is old and well known in the computer arts to

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retrieve and manipulate data using SQL. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use SQL queries to access the database. One would have been motivated to use a standard computer language as SQL to access, create, modify, retrieve, and manipulate data in the database.

Claim 41: Birchenough and Nixon disclose a system and method for controlling and monitoring a production process as in claim 39 above, and further disclose that the system has communication link to provide remote access and allows the retrieval of data (column 26, lines 39-52) Birchenough, and Nixon (paragraph 0009; specs), but neither reference explicitly disclose that the standard interface is SQL. However, Official notice is taken that it is old and well known in the computer arts to retrieve and manipulate data by SQL through the standard interfaces. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use standard interface with SQL to access the database remotely. One would have been motivated to use standard interface with SQL to access database remotely such as through the internet.

Response to Arguments

6. Applicant's arguments filed April 19, 2007 have been fully considered but they are not persuasive.

a. Applicant argues that the amendment overcomes the rejection under 35 U.S.C. 112, to claims 31, 34, 35, and 39. However, claims 31, 34, and 35 are still reciting a limitation "SCADA clients" without explaining it where it appears first time in the chain of independent/dependent claims, and claim 39 still recites "SQL" without explaining it in the claim(s). Therefore, the rejection under 35 U.S.C. 112 second paragraph as above, still holds.

b. Applicant argues that after the amendment to claim 25, Birchenough et al. (US 6,615,091) does not disclose or suggest that, "the process information data for the HMI and the historian database are simultaneously acquired based upon a single application". However, Birchenough discloses that the process information is acquired for the station agent i.e. a user and history store i.e. historian database at the same time using a single application i.e. control coordinator (column 44, lines 18-31), and also that the production processing information or data is acquired through the input/output modules or interfaces and for the historian database i.e. history log (column 40, lines 1-41). Therefore, examiner disagrees with the applicant's arguments and believes that the rejection to claim 25 and all the dependent claims thereof still holds, as above.

The amendment canceled claim 38, which was previously rejected under 35 U.S.C. 103, and added that limitation to independent claim 25. Therefore, claims 25-36, 40, 42-46 are now rejected under 35 U.S.C. 103 based on Birchenough et al. (US 6,615,091)

in view of Lewis et al. (US 5,812,394), and claims 37, 39, 41 further in view of Nixon et al. (US 2002/0077711), same references as in the previous office action.

c. The applicant's argument that because the rejection under 35 U.S.C. 102 is inapplicable so the rejection under 35 U.S.C. 103 also fails, is not persuasive. As explained above, because of the new limitations added to the claim 25, it is now rejected under 35 U.S.C. 103 based on the same references as in the previous office action. Therefore, the examiner disagrees with the applicant's arguments, and believes that the rejection still holds.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hirdepal Singh whose telephone number is 571-270-1688. The examiner can normally be reached on Mon-Fri (Alternate Friday Off) 9:00am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on 571-270-1065. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3800.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

H.S.
May 15, 2007


James W. Myhre
Supervisory Primary Examiner